

Form PTO-1449

**INFORMATION DISCLOSURE
CITATION
IN AN APPLICATION**
(Use several sheets if necessary)

Docket Number (Optional)
MTV-014.03 (20021-1403)

Application Number:
10/004,101

Applicant Buchwald et al

Filing Date October 23, 2001 **Group Art Unit** 1626

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U.S. PATENT DOCUMENTS

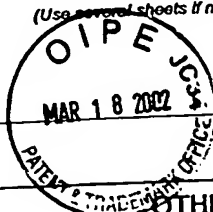
EXAM. INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
B	A 4,383,112	5/10/83	Laidler et al	542		
	B 4,723,033	2/2/88	Erickson	560		
	C 4,877,908	10/31/89	Petit et al	568		
	D 4,885,376	12/5/89	Verkade	556		
	E 5,008,457	4/16/91	Burk	568		
	F 5,099,077	3/24/92	Petit et al	568		
	G 5,162,586	11/10/92	Villacorta et al	568		
	H 5,177,230	1/5/93	Burk	556		
	I 5,187,135	2/16/93	Kolich et al	502		
	J 5,187,136	2/16/93	Klobucar et al	502		
	K 5,187,281	2/16/93	Kolich et al	562		
	L 5,210,202	5/11/93	Petit et al	548		
	M 5,268,492	12/7/93	Yamamoto et al	549		
	N 5,322,956	6/21/94	Burk	556		
	O 5,334,791	8/2/94	Cavell et al	585		
	P 5,440,062	8/8/95	Villacorta et al	556		
	Q 5,508,458	4/16/96	Zhao	556		
	R 5,530,150	6/25/96	Takaya et al	556		
	S 5,739,396	4/14/98	Trost et al	564		
	T 5,756,838	5/26/98	Davis et al	562		
	U 5,767,276	6/16/98	Zhang	546		
	V 5,777,087	7/7/98	Kohlpaintner et al	534		
B	W 5,789,333	8/4/98	Angelici et al	502		

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FOREIGN PATENT DOCUMENTS

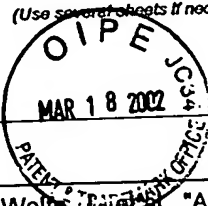
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
B	X WO 89/10916	16.11.89	PCT			
	Y WO 92/09552	11.06.92	PCT			
	Z WO 97/13763	17.04.97	PCT			
	AA WO 97/24351	10.07.97	PCT			
	BB WO 97/47633	18.12.97	PCT			
	CC EP 0 529 908 B1	14.05.97	EP			
	DD 51132190 A	17.11.76	Japan			
	EE 5-97880		Japan			
B	FF 5-239076		Japan			

Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)	Docket Number (Optional) MTV-014.0 3 (20021-1403)	Application Number: 10/004,101
	Applicant Buchwald et al	Group Art Unit 1626
Filing Date October 23, 2001		MAR 20 2002 TECH CENTER 1600/2900



OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
GG	Ahman, J., et al., "Asymmetric Arylation of Ketone Enolates," <i>J. Am. Chem. Soc.</i> , 120, pp. 1918-1919, 1998.	
HH	Benincori, T., et al., "(Diphenylphosphino)-biheteroaryls: the First Example of a New Class of Chiral Atropisomeric Chelating Diphosphine Ligands for Transition Metal Catalyzed Stereoselective Reactions," <i>J. Chem. Soc., Chem. Commun.</i> , pp. 685-686, 1995.	
II	Fiaud, J., et al., "Preparation of Optically Pure 1,2,5-Triphenylphospholane. Use as Ligand for Enantioselective Transition-Metal Catalysis," <i>Tetrahedron Letters</i> , Vol. 32, No. 38, pp. 5089-5092, 1991.	
JJ	Frejd, T., et al., "2,2'-Dimethyl-6,6'-bis(diphenylphosphino)biphenyl (BIPHEMP) as a Chiral Ligand for Transition Metal Catalyzed Asymmetric Synthesis of Binaphthyls and for Asymmetric Hydrogenation. A Comparison with BINAP," <i>Acta Chemica Scandinavica</i> 43, pp. 670-675, 1989.	
KK	Hiroi, K., et al., "Asymmetric Induction Reactions. VI. ^{1,2} Asymmetric Synthesis of a Cyclopentene Derivative by Transition Metal-Catalyzed Asymmetric Vinylcyclopropane-Cyclopentene Rearrangements with Chiral Phosphine Ligands," <i>Chem. Pharm. Bull.</i> , 42(3) pp. 470-474 1994.	
LL	Shirakawa, E., et al., "Carbostannylation of Alkynes Catalyzed by an Iminophosphine - Palladium Complex," <i>J. Am. Chem. Soc.</i> , 120, pp. 2975-2976, 1998.	
MM	Sodeoka, M., et al., "Stable Diaqua Palladium (II) Complexes of BINAP and Tol-BINAP as Highly Efficient Catalysts for Asymmetric Aldol Reactions," <i>SYNLETT</i> , pp. 463-466, May 1997.	
NN	Sodeoka, M., et al., "Asymmetric Synthesis Using Palladium Catalysts," <i>Pure & Appl. Chem.</i> , Vol. 70, No. 2, pp. 411-414, 1998.	
OO	Tamao, K., et al., "Optically Active 2,2'-bis(Diphenylphosphinomethyl)-1,1'-Binaphthyl: A New Chiral Bidentate Phosphine Ligand for Transition-Metal Complex Catalyzed Asymmetric Reactions," <i>Tetrahedron Letters</i> , No. 16, pp. 1389-1392, 1977.	
PP	Tanner, D., et al., "C ₂ -Symmetric Bis(Aziridines): A New Class of Chiral Ligands for Transition Metal-Mediated Asymmetric Synthesis," <i>Tetrahedron Letters</i> , Vol. 35, No. 26, pp. 4631-4634, 1994.	
QQ	Tokunoh, R., et al., "Synthesis and Crystal Structure of a New C ₂ -Symmetric Chiral Bis-sulfoxide Ligand and Its Palladium (II) Complex," <i>Tetrahedron Letters</i> , Vol. 36, No. 44, pp. 8035-8038, 1995.	
RR	Trost, B., et al., "Asymmetric Ligands for Transition-Metal-Catalyzed Reactions: 2-Diphenylphosphinobenzoyl Derivatives of C ₂ -Symmetric Diols and Diamines," <i>Angew. Chem. Int. Ed. Engl.</i> 31 No. 2, 1992.	
SS	Trost, B., et al., "Synthesis of 2,2'-Bis(diphenylphosphino)-1,1'-binaphthyl (BINAP), an Atropisomeric Chiral Bis(triaryl)phosphine, and Its Use in the Rhodium(I)-Catalyzed Asymmetric Hydrogenation of α -(Acylamino) acrylic Acids," <i>J. Am. Chem. Soc.</i> , 102, pp. 1932-1934, 1980.	
TT	Vyskocil, S., et al., "Derivatives of 2-Amino-2'-diphenylphosphino-1,1'-binaphthyl (MAP) and their Application in Pd(0)-Catalyzed Allylic Substitution," <i>Am. Chem. Soc., Newsletter and Abstracts</i> , 216 th ACS National Meeting, Boston, MA August 23-27, 1998, #538.	

Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)	Docket Number (Optional) MTV-014.3		Application Number: 10/004,101
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8	UU	Wolfe, David et al., "An Improved Catalyst System for Aromatic Carbon-Nitrogen Bond Formation: The Possible Involvement of Bis(Phosphine) Palladium Complexes as Key Intermediates," <i>J. Am. Chem. Soc.</i> , 118, pp. 7215-7216, 1996.
	WV	
EXAMINER <i>Therese Sackey</i>		DATE CONSIDERED 8/27/02

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**INFORMATION DISCLOSURE STATEMENT
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Applicant Buchwald, S. L. et al.

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Group Art Unit
1626**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
ES	BF WO 98/15515	04/16/98	PCT	—	—		X
ES	BG EP 0 503 884 A1	09/16/92	European Patent	—	—		X
ES	BH EP 0 647 648 B1	03/10/99	European Patent	—	—		X

OTHER DOCUMENTS

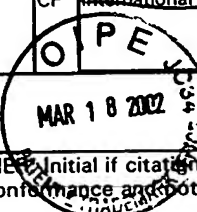
(Including Author, Title, Date, Pertinent Pages, Etc.)

ES	BI	Aranyos et al., "Novel Electron-Rich Bulky Phosphine Ligands Facilitate the Palladium-Catalyzed Preparation of Diaryl Ethers", J. AM. Chem. Soc. 121: 4369-4378 (1999)					
	BJ	Bronco, S. and Consiglio, G., "Regio- and Stereoregular Copolymerisation of Propene with Carbon Monoxide Catalysed by Palladium Complexes Containing Atropisomeric Diphosphine Ligands", Macromol. Chem. Phys. 197: 355-365 (1996).					
	BK	Chemical Abstracts Vol. 123; no. 15, October 9, 1995, Abstract no. 197945; Columbus, Ohio, US.					
	BL	Chemical Abstracts Vol. 124 no. 25, June 17, 1996; Abstract no. 343650, Columbus Ohio, US					
	BM	Chemical Abstracts vol. 127 no. 21; November 24, 1997, Abstract no.293410, Columbus Ohio					
	BN	Cho, Y. S. and Shibasaki, M., "Synthesis and Evaluation of a New Chiral Ligand: 2-diphenylarsino-2'-diphenylphosphino-1,1'-binaphthyl (BINAPAS)", Tetrahedron Letters 39: 1773-1776 (1998).					
	BO	Cramer et al., "Practical Synthesis of (S)-2-(4-fluorophenyl)-3-methylbutanoic acid, key building block for the calcium antagonist Mibefradil", Tetrahedron: Asymmetry 8 (21): 3617-3623 (1997)					
	BP	Ding, K. et al., "Highly Efficient and Practical Optical Resolution of 2-Amino-2'-hydroxy-1,1'-binaphthyl by Molecular Complexation with N-Benzylcinchonidium Chloride: A Direct Transformation to Binaphthyl Amino Phosphine", Chem. Eur. J. 5 (6): 1734-1737 (1999).					
	BQ	Empsall, D. H. et al., "Complexes of Platinum and Palladium with Tertiary Dimethoxyphenyl-Phosphines: Attempts to Effect O- or C-Metallation", Journal of the Chemical Society Dalton Transactions no. 3: 257-262 (1978).					
	BR	Gill, F. D. et al., "Transition Metal-Carbon Bonds. Part XXXIII. Internal Metallations of Secondary and Tertiary Carbon Atoms by Platinum(II) and Palladium (II).", Journal of the Chemical Society, Dalton Transactions no. 3: 270-278 (1973).					
	BS	Gladioli, S. et al., "Synthesis, Crystal Structure, Dynamic Behavior and Reactivity of Dinaphthol [2,1-b:1',2'-d]phospholes and Related Atropisomeric Phosphacyclic Derivatives", J. Org. Chem. 59 (21): 6363-6371 (October 21, 1994).					
ES	BT	Gladioli, S. et al., "Novel Heterobidentate Ligands for Asymmetric Catalysis: Synthesis and Rhodium-catalysed Reactions of S-Alkyl (R)-2-Diphenylphosphino-1,1'-binaphthyl-2'-thiol", Tetrahedron: Asymmetry 5 (7): 1143-1146 (1994).					

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3	BU	Hayashi Tamion, "Asymmetric hydrosilylation of Olefins Catalyzed by MOP-Palladium Complexes", Acta Chem. Scand. 50 (3): 259-266 (1996).
	BV	Hattori, T. et al., "Nucleophilic Aromatic Substitution Reactions of 1-Methoxy-2-(diphenylphosphinyl)naphthalene with C-, N-, and O-Nucleophiles: Facile Synthesis of Diphenyl(1-substituted-2-naphthyl)Phosphines", Synthesis, no. 2 : 199-202 (Feb. 1994).
	BW	Herrmann, A. et al., "Palladacycles: Efficient New Catalysts for the Heck Vinylation of Aryl Halides", Chemistry, A European Journal, 3 (8) :1357-1364 (August 1997).
	BX	Langer et al., "Catalytic Asymmetric Hydrosilylation of Ketones Using Rhodium-(II)-Complexes of Chiral Phosphinooxazoline Ligands", Tetrahedron : Asymmetry 7(6): 1599-1602 (1996).
	BY	Jones et al., "O- and C- Metallation of 2-Alkoxyphenylphosphines by Platinum (III)", Journal of the Chemical Society, Dalton Transactions. no9 : 992-999 (1974).
	BZ	Old, W. et al., "A Highly Active Catalyst for Palladium-Catalyzed Cross-Coupling Reactions: Room-Temperature Suzuki Couplings and Amination of Unactivated Aryl Chlorides", J. Am. Chem. Soc. 120: 9722-9723 (1998).
	CA	Palucki et al., "Synthesis of Oxygen Heterocycles via a Palladium Catalyzed C-O Bond-Forming Reaction", J. Am. Chem. Soc. 118: 10333- 10334 (1996).
	CB	Palucki et al., "Palladium-Catalyzed Intermolecular Carbon-Oxygen Bond Formation: A New Synthesis of Aryl Ethers", J. Am. Chem. Soc. 119 : 3395-3396 (1997).
	CC	Vyskočil et al., "Derivatives of 2-Amino-2'-dephenylphosphino-1,1'-binaphthyl (MAP) and Their Application in Asymmetric Palladium(0)-Catalyzed Allylic Substitution", J. Org. Chem. 63 (22) : 7738-7748 (1998).
	CD	Wolfe, P. J. and Buchwald, L. S. "A Highly Active Catalyst for the Room-Temperature Amination and Suzuki Coupling of Aryl Chlorides", Angewandte Chemie. International Edition 38 (16) : 2413- 2416 (1999).
3	CE	Wolfe, P. J. et al. "Highly Active Palladium Catalysts for Suzuki Coupling Reactions", J. Am. Chem. Soc. 121(41):9550-9561 (October 20, 1999).
	CF	International Search Report
EXAMINER	<div style="display: flex; justify-content: space-between;"> <div>  </div> <div>DATE CONSIDERED</div> </div>	
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1626**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
CG	5,817,877	10/06/98	Hartwig et al.	564	399	09/19/97
CH	5,977,361	11/02/99	Hartwig et al.	544	264	10/14/98
CI	6,100,398	08/08/00	Hartwig et al.	544	264	06/30/99

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
CJ	JP 0 733 0786	12/19/95	Japan Patent Abstract	—	—	X	
CK	JP 0 923 528 9	09/09/97	Japan Patent Abstract	—	—	X	
CL	EP 0 802 173 A1	10/22/97	European Patent	—	—	X	

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

CM	Driver M. S. and Hartwig F. J. "A Second Generation Catalyst for Aryl Halide Animation : Mixed Secondary Amines From Aryl Halides and Primary Amines Catalyzed by (DPPF) PdCl ₂ , J. Am. Chem. Soc. 118 : 7217-7218 (1996).					
CN	Guram S. A. et al.; "A Simple Catalytic Method for the Conversion of Aryl Bromides to Arylamines", Angew. Chem. Int. Ed. Engl. 34 : 1348-1350 (1995).					
CO	Kang, et al. "Catalytic Asymmetric Allylic Alkylation With a Novel P.S. Bidentate Ligand", Bull. Korean Chem. Soc. 16(5): 439-443 (1995).					
CP	Louie, J. and Hartwig F. J. "Palladium-Catalyzed Synthesis of Arylamines from Aryl Halides. Mechanistic Studies Lead to Coupling in the Absence of Tin Reagents", Tetrahedron Letters 36(21): 3609-3611 (1995).					
CO	Mann, G. and Hartwig, F. J. "Palladium Alkoxides : Potential Intermediary in Catalytic Amination, Reductive Elimination of Ethers, and Catalytic Etheration. Comments on Alcohol Elimination from Ir(III) J. Am. Chem. Soc. 118 :13109- 13110 (1996).					
CR	Wolfe P. J. and Buchwald L. S. " Palladium Catalyzed Amination of Aryl Iodides ", J. Org. Chem. 61: 1133-1135 (1996).					
CS	Zhao, et al. " Synthesis of Arylpiperazines via Palladium-Catalyzed Aromatic Amination Reaction with Unprotected Piperazines", Tetrahedron Letters 37(26): 4463-4466 (1996).					

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Applicant
Buchwald et al.

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Group Art Unit
1686

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER		DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
E	CT	US 4,604,474	08/05/86	Kumobayashi et al.	556	7	03/21/85
	CU	US 4,691,037	09/01/87	Yoshikawa et al.	556	18	01/06/86
	CV	US 4,739,084	04/19/88	Takaya et al.	556	21	04/15/87
	CW	US 4,739,085	04/19/88	Takaya et al.	556	21	06/15/87
	CX	US 4,954,644	09/04/90	Sayo et al.	556	14	09/07/88
	CY	US 4,994,590	02/19/91	Takaya et al.	556	21	10/24/89
	CZ	US 5,012,002	04/30/91	Kumobayashi et al.	568	17	06/15/90
	DA	US 5,144,050	09/01/92	Chan et al.	556	20	10/01/91
	DB	US 5,206,399	04/27/93	Sayo et al.	556	20	10/01/91
	DC	US 5,223,632	06/29/93	Ishizaki et al.	556	21	03/01/91
	DD	US 5,274,146	12/28/93	Ishizaki et al.	556	14	11/17/92
	DE	US 5,312,939	05/17/94	Hori et al.	556	14	07/10/91
	DF	US 5,347,045	09/13/94	Herrmann et al.	562	35	05/25/93
	DG	US 5,481,045	01/02/96	Herrmann et al.	568	454	05/11/94
	DH	US 5,510,503	04/23/96	Laue et al.	556	21	09/02/94
	DI	US 5,510,554	04/23/96	Regnat et al.	585	466	11/14/94
	DJ	US 5,565,398	10/15/96	Herrmann et al.	502	166	11/02/95
	DK	US 5,631,393	05/20/97	Kohlpaintner et al.	556	17	05/02/95
	DL	US 5,648,548	07/15/97	Takaya et al.	568	17	03/13/96
	DM	US 5,693,868	12/02/97	Sayo et al.	568	8	10/30/96
	DN	US 5,710,337	01/20/98	Unruh et al.	568	16	04/10/96
	DO	US 5,710,338	01/20/98	Unruh et al.	568	16	04/10/96
	DP	US 5,736,480	04/07/98	Davis et al.	502	155	01/12/95
	DQ	US 5,756,760	05/26/98	Miyano et al.	548	413	03/07/97
	DR	US 5,756,838	05/26/98	Davis et al.	562	553	08/16/95
	DS	US 5,767,276	06/16/98	Zhang	546	2	10/11/96
	DT	US 5,777,087	07/07/98	Kohlpaintner et al.	534	14	04/18/96

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8	AP	Kawatsura, M. et al., "Simple, Highly Active Palladium Catalysts for Ketone and Malonate Arylation: Dissecting the Importance of Chelation and Steric Hindrance", <i>J. Am. Chem. Soc.</i> , 121:1473-1478 (1999).
	AQ	Littke, A. et al., "A Convenient and General Method for Pd-Catalyzed Suzuki Cross-Couplings of Aryl Chlorides and Arylboronic Acids", <i>Angew. Chem. Int. Ed.</i> , 37:3387-3388 (1998).
	AR	Mann, G. et al., "Palladium-Catalyzed C-N(sp ²) Bond Formation: N-Arylation of Aromatic and Unsaturated Nitrogen and the Reductive Elimination Chemistry of Palladium Azolyl and Methyleneamido Complexes", <i>J. Am. Chem. Soc.</i> , 120:827-828 (1998).
	AS	Mann, G. et al., "Palladium-Catalyzed C-O Coupling Involving Unactivated Aryl Halides. Sterically Induced Reductive Elimination To Form the C-O Bond in Diaryl Ethers", <i>J. Am. Chem. Soc.</i> , 121:3224-3225 (1999).
	AT	Mitchell, M. B. et al., "Coupling of Heteroaryl Chlorides with Arylboronic Acids in the Presence of [1,4-Bis-(Diphenylphosphine)butane]Palladium(II) Dichloride", <i>Tetrahedron Letters</i> , 20:273-276 (1991).
	AU	Muratake, H. et al., "Intramolecular Cyclization Using Palladium-Catalyzed Arylation toward Formyl and Nitro Groups", <i>Tetrahedron Letters</i> , 40:2355-2358 (1999).
	AV	Muratake, H. et al., "Palladium-Catalyzed Intramolecular α -Arylation of Aliphatic Ketones", <i>Tetrahedron Letters</i> , 38:7581-7582 (1997).
	AW	Nishiyama, M. et al., "Synthesis of N-Arylpiperazines from Aryl Halides and Piperazine under a Palladium Tri-terbutylphosphine Catalyst", <i>Tetrahedron Letters</i> , 39:617-620 (1998).
	AX	Reddy, N. P. et al., "Palladium-Catalyzed Amination of Aryl Chlorides", <i>Tetrahedron Letters</i> , 27:4807-4810 (1997).
	AY	Reirmeier, T. et al., "Palladium-catalyzed C-C- and C-N-coupling reactions of Aryl Chlorides", <i>Topics in Catalysis</i> , 4:301-309 (1997).
	AZ	Saito, S. et al., "Synthesis of Biaryls via a Nickel(0)-Catalyzed Cross Coupling Reaction of Chloroarenes with Arylboronic Acids", <i>J. Org. Chem.</i> , 62:8024-8030 (1997).
	BA	Shen, W., "Palladium Catalyzed Coupling of Aryl Chlorides with Arylboronic Acids", <i>Tetrahedron Letters</i> , 38:5575-5578 (1997).
	BB	Thompson, W. et al., "An Efficient Synthesis of Arylpyrazines and Bipyridines", <i>J. Org. Chem.</i> , 53:2052-2055 (1988).
	BC	Uemura, M. et al., "Catalytic asymmetric induction of planar chirality: Palladium-catalyzed asymmetric cross-coupling of <i>meso</i> tricarconyl(arene)chromium complexes with alkenyl- and arylboronic acids", <i>J. Organometallic Chem.</i> , 473:129-137 (1994).
	BD	Wang, D. et al., "New polymerization catalyzed by palladium complexes: synthesis of poly(<i>p</i> -phenylenevinylene derivatives", <i>Chem. Commun.</i> , 529-530 (1999).
8	BE	Yamamoto, T. et al., "Palladium-Catalyzed Synthesis of Triarylamine from Aryl Halides and Diarylamines", <i>Tetrahedron Letters</i> , 39:2367-2370 (1998).

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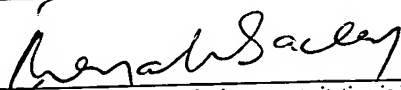
DU	US 5,780,692	07/14/98	Sakaguchi et al.	568	814	12/24/96
DV	US 5,789,609	08/04/98	Tamao et al.	556	18	10/22/97
DW	US 5,789,624	08/04/98	Unruh et al.	568	454	04/10/96
DX	US 5,808,162	09/15/98	Sayo et al.	568	10	07/18/96
DY	US 5,824,830	10/20/98	Ikariya	585	269	08/12/97
DZ	US 5,827,794	10/27/98	Davis et al.	502	162	09/28/95
EA	US 5,847,222	12/08/98	Yokozawa et al.	568	16	08/26/97

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
			PCT				X
EB	WO 95/22405	08/24/95					X
EC	EP 0 118 257 A1	09/12/84	European Patent Application				X
ED	EP 0 118 257 B1	12/17/86	European Patent Specification				X
EE	EP 0 135 392 A2	03/27/85	European Patent Application				X
EF	EP 0 135 392 B1	02/03/88	European Patent Specification				X
EG	EP 0 156 607 A2	10/02/85	European Patent Application				X
EH	EP 0 156 607 B1	10/02/85	European Patent Specification				X
EI	EP 0 174 057 A2	03/12/86	European Patent Application				X
EJ	EP 0 174 057 B1	03/12/86	European Patent Specification				X
EK	EP 0 235 450 A1	09/09/87	European Patent Application				X
EL	EP 0 466 405 A1	01/15/92	European Patent Application				X
EM	EP 0 466 405 B1	01/15/92	European Patent Specification				X
EN	EP 0 826 694 A1	03/04/98	European Patent Application				X

OTHER DOCUMENTS
(Including Author, Title, Date, Pertinent Pages Etc.)

EXAMINER



DATE CONSIDERED

8/27/02

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Form PTO-1449

**INFORMATION DISCLOSURE CITATION
IN AN APPLICATION**
(Use several sheets if necessary)

Docket Number (Optional)
MTV-014.03 (20021-1403)

Application Number
10/004,101

Applicant
Buchwald, S. L. et al.

Filing Date
October 23, 2001

Group Art Unit
1626

MAR 18 2002

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
						RECEIVED
						MAR 20 2002
						TECH CENTER 1600/2900

FOREIGN PATENT DOCUMENTS

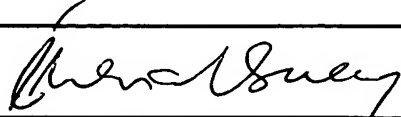
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
ES	EO WO 98/12202	03/26/98	PCT				X
	EP EP 0 667 350 A1	08/16/95	European Patent Application				X
	EQ EP 0 849 274 A1	06/24/98	European Patent Application				X
ES	ER JP 8311090	11/26/96	Japan				X

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages Etc.)

ES	Yoshikawa et al.; "A New Type of Atropisomeric Biphenylbisphosphine Ligand, (R)- MOC-BIMOP and Its Use in Efficient Asymmetric Hydrogenation of α -Aminoketone and Itaconic Acid ^{1a} ", Tetrahedron Asymmetry, 3(1): 13-16, (1992)
ET	Bayston et al.; "Preparation and Use of a Polymer Supported BINAP Hydrogenation Catalyst", J.Org. Chem. 63:3137-3140, (1998)
EU	Enev et al.; "a Bis-Steroidal Phosphine as New Chiral Hydrogenation Ligand", J. Org. Chem. 62: 7092-7093, (1997)
EV	Murata et al.; "Synthesis of Atropisomeric Biphenylbisphosphine, 6,6'-Bis (Dicyclohexylphosphino)-3'-Dimethoxy-2,2',4,4'-Tetramethyl - 1,1'-Biphenyl and its Use In Rhodium (I)- Catalyzed Asymmetric Hydrogenation ^{1a} ", Chem. Pharm. Bull. 39(10): 2767-2769, (1991)
EW	Schmid et al.; "35. Axially Asymmetric Diphosphines in the Biphenyl Series: Synthesis of (6,6'-Dimethoxybiphenyl-2,2'-diyl)bis(diphenylphosphine) ('MeO-BIPHEP') and Analogues via an ortho- Lithiation/ Iodination Ullmann-Reaction Approach", Helvetica Chimica Acta vol. 74: 370-389 (1991)
EX	Uozumi et al.; "Synthesis of Optically Active 2-(Diarylphosphino)-1,1'-binyaphthyls, Efficient Chiral Monodentate Phosphine Ligands", J. Org. Chem. 58: 1945-1948, (1993)
EY	Vyskočil et al.; "Derivatives of 2-amino-2'-diphenylphosphino-1,1'-binaphthyl (MAP) and Their Application in Asymmetric Palladium (0)-Catalyzed Allylic Substitution", J. Org. Chem. 63: 7738-7748, (1998)
ES	Zhang et al.; "Synthesis of Partially Hydrogenated BINAP Variants", Tetrahedron Letters 32(49): 7283-7286, (1991)

EXAMINER



DATE CONSIDERED

8/27/02

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Form PTO-1449	Docket Number (Optional) MTV-014.03 (20021-1403)	Application Number 10/004,101
INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary) MAR 18 2002 PATENT & TRADEMARK OFFICE	Applicant Buchwald, S. et al	
	Filing Date October 23, 2001	Group Art Unit 1626

U.S. PATENT DOCUMENTS

DOCUMENT NUMBER			DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
BS	AA	4,992,519	02/12/91	Hou, D. et al.	568	315	21 December 1989

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
						RECEIVED MAR 20 2002	

OTHER DOCUMENTS

TECH CENTER 1600/2900

BS	AB	Bei, X. et al., "A Convenient Palladium/Ligand Catalyst for Suzuki Cross-Coupling Reactions of Arylboronic Acid and Aryl Chlorides", <i>Tetrahedron Letters</i> , 40:3855-3858 (1999).					
	AC	Bei, X. et al., "General and Efficient Palladium-Catalyzed Aminations of Aryl Chlorides", <i>Tetrahedron Letters</i> , 40:1237-1240 (1999).					
	AD	Bei, X. et al., "Phenyl Backbone-Derived P,O- and P,N-Ligands for Palladium/Ligand-Catalyzed Aminations of Aryl Bromides, Iodides, and Chlorides. Synthesis and Structures of (P,O) _n -Palladium(II)Aryl(Br) Complexes", <i>Organometallics</i> , 18:1840-1853 (1999).					
	AE	Beller, M. et al., "First Palladium-Catalyzed Aminations of Aryl Chlorides", <i>Tetrahedron Letters</i> , 38:2073-2074 (1997).					
	AF	Beller, M., "Palladacycles as Efficient Catalysts for Aryl Coupling Reactions", <i>Angew. Chem. Int. Ed. Engl.</i> , 34:1848-1849 (1995).					
	AG	Brenner, E. et al., "New Efficient Nickel(0) Catalyzed Amination of Aryl Chlorides", <i>Tetrahedron Letters</i> , 39:535-5362 (1998).					
	AH	Bumagin, N. et al., "Ligandless Palladium catalyzed Reactions of Arylboronic Acids and Sodium Tetraphenylborate with Aryl Halides in Aqueous Media", <i>Tetrahedron</i> , 53:14437-14450 (1997).					
	AI	Cho, S. Y. et al., "The asymmetric synthesis of cyclopentane derivatives by palladium-catalyzed coupling of prochiral alkylboron compounds", <i>Tetrahedron:Asymmetry</i> , 9:3751-3754 (1998).					
	AJ	Cornils, B., "Industrial Aqueous Biphasic Catalysis: Status and Directions", <i>Org. Proc. Res. Dev.</i> , 2:121-127 (1998).					
	AK	Firooznia, F. et al., "Synthesis of 4-Substituted Phenylalanines by Cross-Coupling Reactions: Extension of the Methodology to Aryl Chlorides", <i>Tetrahedron Letters</i> , 39:3985-3988 (1998).					
	AL	Galland, J.-C. et al., "Cross-Coupling of Chloroarenes with Boronic Acids using a Water-Soluble Nickel Catalyst", <i>Tetrahedron Letters</i> , 40:2323-2326 (1999).					
	AM	Hamann, B. et al., "Sterically Hindered Chelating Alkyl Phosphines Provide Large Rate Accelerations in Palladium-Catalyzed Amination of Aryl Iodides, Bromides, and Chlorides, and the First Amination of Aryl Tosylates", <i>J. Am. Chem. Soc.</i> , 120:7369-7370 (1998).					
	AN	Herrmann, W. et al., "Chelating N-heterocycle carbene ligands in palladium-catalyzed heck-type reactions", <i>J. Organometallic Chem.</i> , 557:93-96 (1998).					
BS	AO	Indolese, A., "Suzuki-Type Coupling of Chloroarenes with Arylboronic Acids Catalysed by Nickel Complexes", <i>Tetrahedron Letters</i> , 38:3512-3516 (1997).					